Supporting Statement

30 C.F.R. §57.5047, Gamma Radiation Exposure Records (pertains to metal and nonmetal underground mines)

A. Justification

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

Under Section 103(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act), the Mine Safety and Health Administration (MSHA) is required to ". . . issue regulations requiring operators to maintain accurate records of employee exposures to potentially toxic materials or harmful physical agents which are required to be monitored or measured under any applicable mandatory health or safety standard promulgated under this Act." In addition, Title 30 of the Code of Federal Regulations at § 57.5047 (a) requires that gamma radiation surveys be conducted annually in all underground mines where radioactive ores are mined. (b) Surveys shall be in accordance with American National Standard (ANSI) N13.8-1973 entitled "Radiation Protection in Uranium Mines" …(c) Where average gamma radiation measurements are in excess of 2.0 milliroentgens per hour in the working place, the standard requires that gamma radiation dosimeters be provided for all persons affected, and that records of cumulative individual gamma radiation exposures be kept. The standard (d) also specifies that annual individual gamma radiation exposure shall not exceed 5 Rems.

Gamma radiation occurs where radioactive materials are present. It has been associated with lung cancer and other debilitating occupational diseases. Natural sources include rocks, soils, and ground water. Gamma radiation hazards may be found near radiation sources at surface operations using X-ray machines, weightometers, nuclear and diffraction units. Nuclear gauges mounted outside tanks, pipes, bins, hoppers or other types of vessels; gamma rays sense the level and density of liquids, slurries or solids.

Gamma rays penetrate the body and can cause cell death or damage in their path which can affect many of the body's organs. The adverse health effects from exposure to gamma radiation can vary depending upon the type of cell affected and the extent of damage.

Currently there are no underground mines in the United States where radioactive ores are mined. For purposes of estimating the number of respondents, the Agency will use three (3) as the number of mines, which are currently in an abandoned status but reactivating and expected to be in full-production by January 31, 2007. Because the uranium ore at these mines is of a "low-grade" quality, the levels of gamma radiation are historically low; and radiation levels may not reach the level of 2 milliroentgens per hour in the workplace which would require mine operators to conduct gamma radiation monitoring of each affected miners and maintain a record of each exposure pursuant to § 57.5047 (c). Consequently, we do not anticipate that radiation levels will exceed the exposure limit of 5 Rems contained in § 57.5047(d).

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

MSHA intends to use these records in evaluating the effectiveness of a mine operator's protection program in demonstrating compliance with the radiation standards. Records of cumulative occupational radiation exposures aid in the protection of workers and in prevention and control of subsequent radiation exposure.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

No improved information technology has been identified that would reduce the burden.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

Records are unique to each mine. No similar or duplicate information exists that could be used.

5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.

This information does not have a significant impact on small businesses or other small entities. However, MSHA has made available on our web-site various sources of information, such as "Technical Assistance," "Best Practices," and an "Accident Prevention" site. To assist with compliance, these provide tips and general information on a number of various topics.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

The standard requires that gamma radiation surveys be conducted annually in all underground mines where radioactive ores are mined. Where average gamma radiation measurements are in excess of 2.0 milliroentgens per hour, gamma radiation dosimeters shall be provided to all persons affected and records of cumulative individual gamma radiation exposure are required to be kept. MSHA believes that monitoring of miners' exposures to gamma radiation essential to protection of their health at these underground mines. Inadequate gamma radiation exposure records may result in undetected and unremedied excessive exposures.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- **! requiring respondents to report information to the agency more often than quarterly;**
- **! requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
- **! requiring respondents to submit more than an original and two copies of any document;**

- **requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records for more than three years;**

- **in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;**

- **requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**

- **that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**

- **requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

This information collection is consistent with the guidelines in 5 CFR § 1320.5.

8. If applicable, provide a copy and identify the data and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years -- even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

In accordance with 5 CFR 1320.8 (d), MSHA will publish the proposed information collection requirements in the Federal Register, notifying the public that these information collection requirements are being reviewed in accordance with the Paperwork Reduction Act of 1995, and giving interested persons 60 days to submit comments.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

MSHA has made no decision to provide payment or gifts to the respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the

assurance in statute, regulation, or agency policy.

There is no assurance of confidentiality provided to respondents.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons form whom the information is requested, and any steps to be taken to obtain their consent.

There are no questions of a sensitive nature.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**

- **If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I.**

- **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included in Item 13.**

The annual gamma radiation survey is typically accomplished by taking instant radiation readings with a Geiger counter at all active work places. Although the MSHA standard does not specify how the recordkeeping is to be conducted, it is an information collection activity, and the gamma radiation readings are recorded when taken to verify results and can be used to demonstrate compliance. By September 2006, MSHA anticipates (3) underground mines where radioactive ores will be mined. MSHA estimates that the survey would take a mine supervisor (estimated hourly salary of $52.31, based on the U.S. Metal and Mineral Industrial Mine Salaries, Wages, and Benefits - 2004 Survey Results) approximately one hour to take and record the measurements. The record of the survey would be retained until the next regular inspection (maximum 3 months).

Hour Burden:

3 mines x 1 hour = 3 hours

Hour Burden Cost:

3 hours x $52.31 = $156.93

Due to the low-grade of radioactive ores mined in the United States, there have been no mines where average gamma radiation measurements are in excess of 2.0 milliroentgens per hour in the working place, and none are expected. Therefore, because no gamma radiation dosimeters are provided and no records are kept of cumulative individual gamma radiation exposure, MSHA takes no burden for this activity.

13. Provide an estimate of the total annual cost burden to respondents or record keepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 12 and 14.)

- **The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life); and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**

- **If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**

- **Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.**

There is no annual cost burden to respondents or record keepers resulting from this collection of information.

14. Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information. Agencies also may aggregate cost estimates from Items 12, 13, and 14 in a single table.

No Federal inspection costs have been associated specifically with this information collection. The

examination of these records is just one aspect of the annual inspection. The Mine Act requires MSHA to conduct at least four inspections a year for underground mines and two inspections a year for surface operations.

15. Explain the reasons for any program changes or adjustments reporting in Items 13 or 14 of the OMB Form 83-I.

The number of respondents increased from 2 to 3 mines; the number of burden hours therefore increased from 2 to 3 hours.

16. For collections of information whose results will be published, outline plans for tabulation, and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

The results from the information gathered from this collection will not be published.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

There are no forms associated with this collection.

18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submissions," of OMB Form 83-I.

There are no certification exceptions identified with this information collection.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results. When Item 17 on the Form OMB 83-I is checked "Yes", the following documentation should be included in the Supporting Statement to the extent that it applies to the methods proposed:

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.

2. Describe the procedures for the collection of information including:

. Statistical methodology for stratification and sample selection,

. Estimation procedure,

. Degree of accuracy needed for the purpose described in the justification,

. Unusual problems requiring specialized sampling procedures, and

. Any use of periodic (less frequent than annual) data collection cycles to reduce burden.

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.

4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.

5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other persons(s) who will actually collect and/or analyze the information for the agency.

As statistical analysis is not required by the regulation, questions 1 through 5 do not apply.

Federal Mine Safety & Health Act of 1977,
Public Law 91-173,
as amended by Public Law 95-164*

An Act

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That this Act may be cited as the "Federal Mine Safety and Health Act of 1977".

INSPECTIONS, INVESTIGATIONS, AND RECORDKEEPING

SEC. 103.

(c) The Secretary, in cooperation with the Secretary of Health, Education, and Welfare, shall issue regulations requiring operators to maintain accurate records of employee exposures to potentially toxic materials or harmful physical agents which are required to be monitored or measured under any applicable mandatory health or safety standard promulgated under this Act. Such regulations shall provide miners or their representatives with an opportunity to observe such monitoring or measuring, and to have access to the records thereof. Such regulations shall also make appropriate provisions for each miner or former miner to have access to such records as will indicate his own exposure to toxic materials or harmful physical agents. Each operator shall promptly notify any miner who has been or is being exposed to toxic materials or harmful physical agents in concentrations or at levels which exceed those prescribed by an applicable mandatory health or safety standard promulgated under section 101, or mandated under title II, and shall inform any miner who is being thus exposed of the corrective action being taken.

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TITLE 30--MINERAL RESOURCES

CHAPTER I--MINE SAFETY AND HEALTH ADMINISTRATION, DEPARTMENT OF LABOR

PART 57_SAFETY AND HEALTH STANDARDS_UNDERGROUND METAL AND NONMETAL MINES--Table of Contents

Subpart D_Air Quality, Radiation, Physical Agents, and Diesel Particulate Matter

Sec. 57.5047 Gamma radiation surveys.

(a) Gamma radiation surveys shall be conducted annually in all underground mines where radioactive ores are mined.

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(b) Surveys shall be in accordance with American National Standards (ANSI) Standard N13.8-1973, entitled ``Radiation Protection in Uranium Mines'', section 14.1 page 12, which is hereby incorporated by reference and made a part hereof. This publication may be examined in any Metal and Nonmetal Mine Safety and Health District Office, Mine Safety and Health Administration, or may be obtained from the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.

(c) Where average gamma radiation measurements are in excess of 2.0 milliroentgens per hour in the working place, gamma radiation dosimeters shall be provided for all persons affected, and records of cumulative individual gamma radiation exposure shall be kept.

(d) Annual individual gamma radiation exposure shall not exceed 5 rems.

[50 FR 4082, Jan. 29, 1985, as amended at 60 FR 33723, June 29, 1995; 60 FR 35695, July 11, 1995]

Diesel Particulate Matter--Underground Only

Source: 66 FR 5907, Jan. 19, 2001, unless otherwise noted.